

ABSTRACT OF THE DISCLOSURE

A method for dry etching a polysilicon film to form gate electrodes in a CMOS LSI includes the steps of etching a first portion of the polysilicon film having a higher impurity concentration by using CF-based etching gas, such as CF_4 , CHF_3 and CH_2O_2 , etching a second portion of the polysilicon film having a lower impurity concentration by using etching gas such as Cl_2/O_2 , HBr/O_2 , $\text{Cl}_2/\text{HBr}/\text{O}_2$ and $\text{Cl}_2/\text{HBr}/\text{CF}_4/\text{O}_2$, and etching residues generated in the above etching steps. The CF-based etching gas allows the polysilicon film doped with n-type and p-type impurities to be etched at a uniform etch rate.